DATA ALIGNMENT SYSTEMS AND METHODS ABSTRACT OF THE DISCLOSURE

Systems and methods are disclosed for aligning data in memory access and other applications. In one embodiment, a group of data is obtained for storage in a memory unit. The memory unit has two banks. If the data is aligned, a first portion of the data is written to the first memory bank and a second portion is written to the second memory bank. If the data is not aligned, the first portion is written to the second memory bank and the second portion is written to the first memory bank. In one embodiment, the data is written to the first and second memory banks in a substantially simultaneous manner.